Work Ord July-23-13 1:00	er ID 105028 0:50 PM		·	*105	5028*						Page 1
Item ID: D3953-21 Revision ID: Item Name: Gas Spring Bracket Start Date: 7/23/13 Start Qty: 12 Required Date: 7/23/13 Req'd Qty: 12			A	ccept	*N900040100)* s	etup Sta	i	S1* S2*
Start Date: Required Date Reference:	_	•	*12* *12*		Cust Item I Customer:	D:					
Approvals:	Process Plan:ML		Date: <u>13</u> -07-V	Tooling: SPC (Y/N):		ate:		R	un Sta Sto	n '' [V]	R1* R2*
Sequence ID/ Work Center I	Operation Descript			Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr									•	
D3953	C										
100				0.00							
100 Waterjet FLOW CNC Water 304 . 125	-	Memo 1-Cut as per Dowg Rev: Prog Rev:	<u> </u>	0.00				12	O		JM13-11-6
		2-Deburr if nec	essary								
*110	QC2- Insp	ect parts off mac	nine FAI/FAIB	0.00				. 3			Jm13-11-6
QC		Memo		0.00				15	0	_	<u>Jims</u> . •

Quality Control

DQA:Date:	*************************************
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Positioned Wrong Power Loss/Surge

Other

WORK ORDER NON-CONFORMANCE / UPDATE

NCR: Yes / No QA Closed: Date: AGAINST DEPARTMENT/PROCESS DISPOSITION Work Order: Engineering Skid-tube Crosstube Water Jet Rework Small Fab Quality Machining Prod. Eng. Coor. Scrap Part No. Thermoforming Finishing Rec/Store/Packaging Other Use-as-is Composite Supplier Work Order Update Large Fab NCR No. Description of work order update Action Sign & Initial Root or Non-conformance Chief Eng Description Date Verification QC Inspector Date Step Qty Cause Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved **FAULT CATEGORY Landing Gear** General Pressure/Forced Bending Bend Grain Ovalized BOM/Route Centre Not Concentric to O/S Hardware Over/Under tolerance Temperature/Cure Broken/Damaged Cracks Inspection Incomplete Part Incorrect Weld Wrong Stock Pulled Crushed/Crimped Instructions Incomplete/Unclear Part Lost/Missing Burrs Cuffs Contamination Maintenance Part Moved

Mislabeled

Out of Calibration

Out of Sequence

Outside Dimensions

Misread

Offset

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Inspection Strip in Tube

Torque Waves in Extrusion

Heat Treat

Countersink

Cut Too Short

Drill Holes

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

	Work Order ID 105028 July-23-13 1:00:50 PM			*										
Item ID:	D3953-21			Accept		*N	900	040	100)* s	etup Star	t *N:	S1*	
Révision ID: Item Name:	Gas Spring B	racket									Stop	*N	S2*	
Start Date: Required Date:	7/23/13	Start Qty: 12.00 Req'd Qty: 12.00	*12* *12*				ust Item I ustomer:	D:						
Reference:									-	R	tun Star	* *N	R1*	
Approvals:	Process Plance QC:	an:	Date:	Tooling: SPC (Y/				ite:			Sto	n	R2*	
Sequence ID/ Work Center II	D	Operation Description	-	Set U Run l	p/ Ноцъв		Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp	
120		QC8- Inspect parts - secon	nd check	0.00	2 7 9-89					12				
170		Memo		0.00	Bina	X				10				
Quality Control														DAS
130				0.00										36 9-89
130 Small Fab Small Fab		Memo 1- CHAMFE	ER HOLE AS PER DWG	0.00						12x			B/M	106
		2- DEBURR	IF NECESSARY											
140		QC5-Inspect part comple	eteness to step on W/O	0.00	DAS 27 9-89					12				
140 QC! Quality Control		Memo		0.00	BIL	Op				10				

												DQA:	D	ate:	
NCR: Y	es/	/ No				WORK ORDER NON-	COI	NFORM	MANCE / UPE	DATE		•			
											(QA Closed:	D	ate:	
Work Orde						DISPOSITION				AGAINST D	EP.	ARTMENT	PROCESS		
WOIK Olde	٠					Rework	ור		Skid-tube	Crosstube	٦		Water Je	t	Engineering
Part N	No.					Scrap	1 1	B .	Machining	Small Fab	1	Pro	d. Eng. Coor	-	Quality
				· · · · · · · · · · · · · · · · · · ·		Use-as-is	1		noforming	Finishing	1	Rec/Stor	e/Packagin	g	Other
NCR I	NCR No.					Work Order Update		Composite	nposite S						
											_				
Root					i	ption of work order update	1	Initial	Act			Sign &			
Cause		Date	Step	Qty	(or Non-conformance	Ch	nief Eng	Descr	ription	4	Date	Verificati	on	QC Inspector
Doc/Data	Щ														
Equip/Tooling															
Operator											1				
Material			ļ								1				
Setup			1								1				
Other		ł											İ		
Process											1				
Supplier	<u> </u>						1								
Training		ļ									-				
Unapproved		<u> </u>	<u> </u>	<u> </u>	<u> </u>										<u> </u>
<u> </u>							AUI	LT CATE	GORY						
Landi	ng (Gear			_	General	_	7		_	_			_	7
		Bending			L	Bend		Grain		<u> </u>	⊣.	Ovalized		<u> </u>	Pressure/Forced
	L	Centre N	ot Conce	ntric to	O/S	BOM/Route	\perp	Hardwa		ļ	-	Over/Under		<u> </u>	Temperature/Cure
	L	Cracks				Broken/Damaged		-1 '	ion Incomplete		-	Part Incorre		<u> </u>	Weld
1		Crushed/	'Crimped			Burrs		instruct	ions Incomplete/U	Jnclear	_[Part Lost/Mi	ssing		Wrong Stock Pulled
i	1	Cuffs				Contamination	ı	Mainte	enance		- [Part Moved			

Mislabeled

Out of Calibration

Out of Sequence

Outside Dimensions

Misread

Offset

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Power Loss/Surge

Other

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Inspection Strip in Tube

Torque Waves in Extrusion

Heat Treat

Countersink

Cut Too Short

Drill Holes

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

	Vork Order ID 105028 dy-23-13 1:00:50 PM			*105028*										
Item ID: Revision ID: Item Name:	D3953-21 Gas Spring B	rackét ^s		Accept	*N900	040	100)* s	Setup S	Start Stop		S1* S2*		
Start Date: Required Date: Reference:	7/23/13	Start Qty: 12.00 Req'd Qty: 12.00	*12* *12*		Cust Item II Customer:	D:					14.			
Approvals:	Process Pl	an:	Date:	Tooling:	Da	ate:		R		Start Stop	*N	R1*		
	QC:		Date:	_ SPC (Y/N):	Da	ate:				эсор	*N	R2*		
Sequence ID/ Work Center I	D	Operation Description Identify as per dwg & Sto	ck Location: 876	Set Up/ Run Hours 0.00	Tool ID	Tool #	Plan Code	Accept Qty	Rejec Qty		eject umber	Insp. Stamp	_	
150 Packaging Packaging		Memo	•	0.00				PX	. ,———			DAS 26 9-89		
160 *1 CO*		QC21- Final Inspection -	Work Order Release	0.00			Hr.	} /R-,	m ,	/ 13/11,	3-1 /11	11-7.		

0.00

Memo

Quality Control

m/51109

		•										DQA:	D:	ate:	
NCR:	Yes	/ No				WORK ORDER NON-	COI	NFOR	MANCE / UPI	DATE	~	. Classal.	D.		
											Q/	A Closed:	U.	ate:	
NA/ only Ond						DISPOSITION				AGAINST D	EPAI	RTMENT/	PROCESS		
Work Ord	er: -	4				Rework	7		Skid-tube	Crosstube	7		Water Je	+	Engineering
Part I	No.					Scrap			Machining Small Fab			Proc	d. Eng. Coor	\vdash	Quality
1 410	••••					Use-as-is Thermoforming			~ ⊢	Finishing	1		e/Packaging	-	Other
NCR I	No.					Work Order Update Large Fab			Composite	1	,	Supplie			
	•									· · · · · · · · · · · · · · · · · · ·					
Root					Descri	ption of work order update		Initial	Act	tion	1	Sign &			
Cause		Date	Step	Qty		or Non-conformance	Ct	nief Eng	Desc	ription		Date	Verification	on	QC Inspector
Doc/Data	Ш														
Equip/Tooling	Ш						1								
Operator	Ш														
Material	Щ														
Setup			ļ												
Other	Н		1												
Process	Н														
Supplier	Н				<u> </u>		1								
Training	\vdash														
Unapproved	.		1	<u>.</u>	<u>.</u>		Δι.	LT CATE	GORY	· · · · · · · · · · · · · · · · · · ·				·	L
Land	ing (iear				General	70.	CT CATE	-			,			
		Bending			Г	Bend	Г	Grain		Γ	\log	/alized			Pressure/Forced
	-	Centre N	ot Conce	ntric to	o/s	BOM/Route	\vdash	Hardwa	are		Tov	/er/Under	tolerance	\vdash	Temperature/Cure
	-	Cracks				Broken/Damaged	\vdash	-1	ion Incomplete		⊣	rt Incorrec			Weld
	\vdash	Crushed/	Crimped			Burrs		⊣ `	tions Incomplete/	Unclear	Pa	rt Lost/Mi	ssing		Wrong Stock Pulled
		Cuffs	-			Contamination		Mainte	enance	Γ	Pa	rt Moved			-
	<u>}</u> -					Countersink	Г	Mislabeled				sitioned V	/rong		

Misread

Out of Calibration

Out of Sequence

Outside Dimensions

Offset

Other

Power Loss/Surge

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Inspection Strip in Tube

Torque Waves in Extrusion

Cut Too Short

Drill Holes

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

July-23-13 1:00:50 PM

Work Order ID:

105028

Parent Item:

D3953-21

Parent Item Name:

Gas Spring Bracket

Start Date: 7/23/13

Required Date: 7/23/13

Start Qty: 12.00

Required Qty: 12.00

Comments:

IPP RevA: new issue DD 09.11.30 verified by:EC

IPP Rev:B as per dwg revC DD

	10.03.02 verified b	y:EC											
Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S11GA 304/316 0.125 Sheet		Purchased	No			100	sf	288.3533	0.0144	0.1818948 O:35	· · · · · · · · · · · · · · · · · · ·	Jin	13-11-
				Location		Loc Qty	Lo	c Code					
				MAT020		288.3532632							
				1	22521	19.1432632							
				1	24445	95.2							
				N	1126075	174.01			120	2F00			

											DQA:	Date:	
NCR:	Yes	/ No				WORK ORDER NON-O	100	VFORM	/ANCE / UP	DATE			
											QA Closed:	Date:	
Work Ord	or:					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
WOIK OIG	٠					Rework	1		Skid-tube	Crosstube]	Water Jet	Engineering
Part I	No.					Scrap	1 1		Machining	Small Fab	Pro	d. Eng. Coor.	Quality
									Finishing	-	re/Packaging	Other	
NCR I	No.					I			Large Fab	Composite		Supplier	
Root					i '	ption of work order update	1	Initial		ction	Sign &		
Cause		Date	Step	Qty	(or Non-conformance	Ch	nief Eng	Desc	cription	Date	Verification	QC Inspector
Doc/Data													
Equip/Tooling							İ				:		
Operator													
Material	\Box												
Setup													
Other													
Process						÷							
Supplier			ļ	İ									
Training													
Unapproved	<u>L</u>						L						
						F	AUI	LT CATE	GORY				
Land	ing (7				General		,			7	_	-
	_	Bending				Bend	\perp	Grain			Ovalized		Pressure/Forced
	Centre Not Concentric to O/S			o/s	BOM/Route	L	Hardwa	re		Over/Under	tolerance	Temperature/Cure	
	Cracks				Broken/Damaged	L	- 1 '	on Incomplete		Part Incorre	ct	Weld	
	Crushed/Crimped			L	Burrs	L	Instruct	ions Incomplete	/Unclear	Part Lost/M	issing	Wrong Stock Pulled	
		Cuffs				Contamination		Mainte	nance		Part Moved		
		Heat Tre	at			Countersink		Mislabe	eled		Positioned \	Wrong	_
	Inspection Strip in Tube					Cut Too Short		Misread	i	'Surge	Other		

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

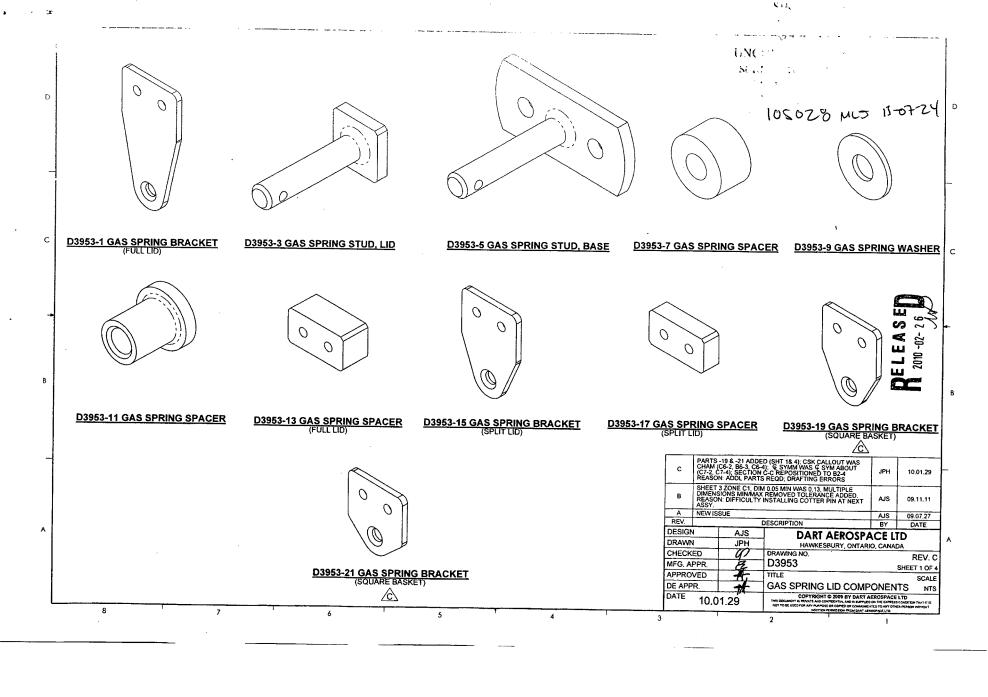
DART AEROSPACE LTD	Work Order:	105078
Description: Gas Spring Bracket	Part Number:	D3953-21
Inspection Dwg: D3953 Rev: C		Page 1 of 1

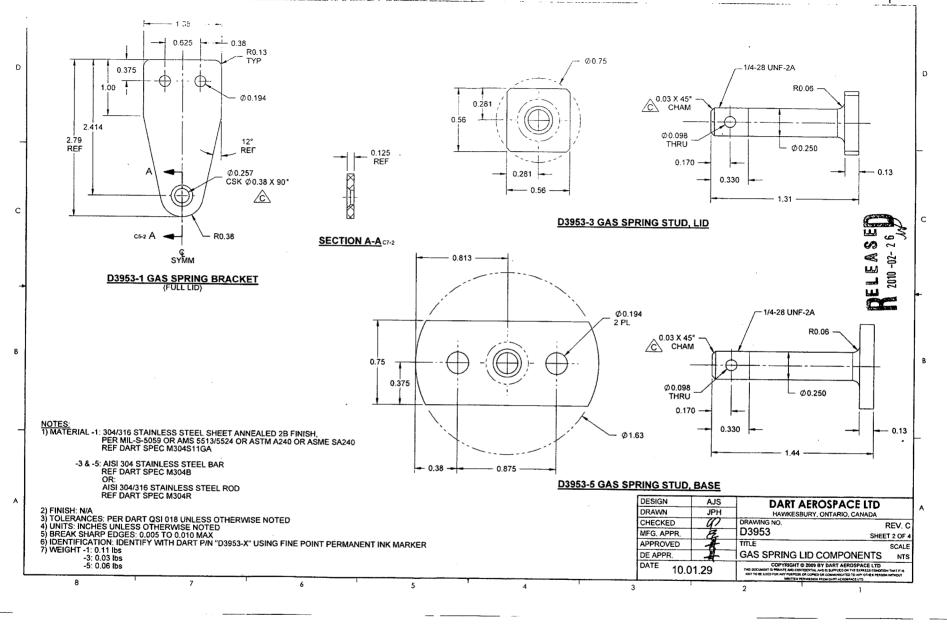
FIRST ARTICLE INSPECTION CHECKLIST

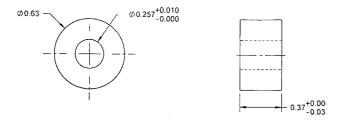
	Drawing imension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
	Ø0.194	+0.005/-0.001	0.194	-		V	Jkmo1
	Ø0.257	+0.006/-0.001	6.258	_		U	
	0.625	+/-0.010	0.627	-		>	
	1.38	+/-0.030	1.384"	_		7	
	0.38	+/-0.010	0.381	-		7	
	0.375	+/-0.010	O.376			U	
	1.00	+/-0.030	1.00	-		ν	
	1.500	+/-0.010	1.503	_		V	
İ	0.125	+/-0.010	٥. ١١٠٠	_		U	
		,					

	.5740	
Measured by: JM	Audited by: 27	Preliminary Approval:
Date: 13-11-6	Date: 13 /1 0C	Date:

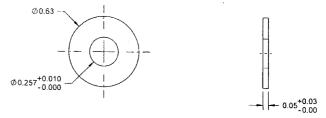
l	Rev	Date	Change	Revised	dVA		Appr	oved
	Α	10.06.07	New Issue	KJ	X		M	
						' 		



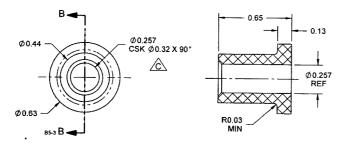




D3953-7 GAS SPRING SPACER

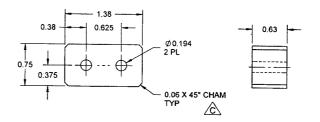


D3953-9 GAS SPRING WASHER



D3953-11 GAS SPRING SPACER

SECTION B-B 87-3



D3953-13 GAS SPRING SPACER

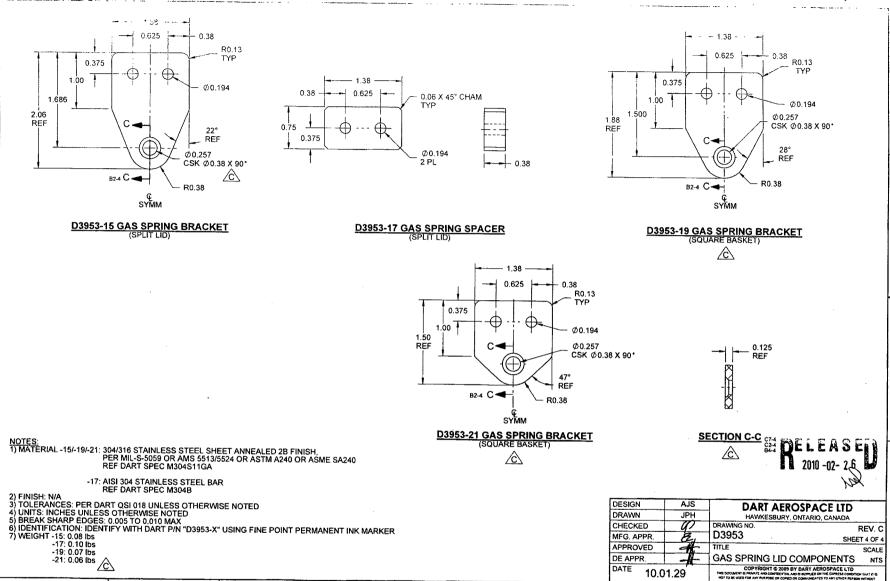
DESIGN	AJS	DART 15000100100	
DRAWN	JPH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED	97	DRAWING NO.	REV. C
MFG. APPR.	B		3 OF 4
APPROVED DE APPR.	#	GAS SPRING LID COMPONENTS	SCALE
DATE 10.01.29		COPYRIGHT & 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS MEAST AND CONTRACTIVE, AND IS SEPALED ON THE CONTRACT CONTRACTIVE MOTTO BE USED FOR ANY EMPIRES BY CONTRACTION OF CONTRACTIVE TO ANY CONTRACT PROBLEM WITHOUT	

NOTES: 1) MATERIAL -7,-9 & -11: DELRIN II 150E OR ACETRON GP ACETAL, BLACK REF DART SPEC M-DELRIN-R

-13: AISI 304 STAINLESS STEEL BAR REF DART SPEC M304B

- 2) FINISH: N/A
 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 6) IDENTIFICATION -13 ONLY: IDENTIFY WITH DART P/N "D3953-13" USING FINE POINT PERMANENT INK MARKER
 7) WEIGHT -7/-9/-11: < 0.01 lbs EACH
 -13: 0.17 lbs

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